

REMARKS

Claims 1-20 were presented for examination in the present application. The instant amendment cancels claims 1, 3, 13-14, and 17 and adds new claims 21-24. Thus, claims 2, 4-12, 15-16, and 18-24 are presented for consideration upon entry of the instant amendment. Applicants reserve the right to file a divisional application directed to the embodiment of the non-elected claims, namely claims 13 and 17.

Claims 21-24 have been added to point out various aspects of the present application. It is submitted that new claims 21-24 are directed to the elected embodiment of Group I. Support for new claim 21 can be found at least in original claims 3 and 14. Support for new claim 23 can be found at least in original claims 1 and 3. Support for new claims 22 and 24 can be found in the specification at least at Page 6, lines 17-20.

The specification has been amended to include an abstract of the disclosure. Support for this amendment can be found at least in original claim 1.

Claims 2, 4-6, 8, 11-12, and 15-16 have been amended to provide proper antecedent basis to all claim elements. For example, claims 2, 4-6, 8, and 11-12 have been amended to change "the coating material" to "the solidifiable liquid material". Similarly, claims 15 and 16 have been amended to change "solidifiable liquid composition" to "solidifiable liquid material". Claim 18 has been amended to correct an obvious typographical error, namely to change "reduced" to "reduces". It is respectfully submitted that these amendments merely make explicit what had been implicit in the claims.

Claims 3-5 were rejected under 35 U.S.C. §112, first paragraph. The Office Action asserts that Figure 2 does not illustrate the introduction of the air stream between the surface, which is asserted as being wall 14d, and the flowing material. Applicants respectfully traverse this rejection.

It is respectfully submitted that the specification at least at pages 9-11, as well as in

Figure 2, provides a trough or supply means 14. The trough 14 has three walls or surfaces, 14a, 14b, and 14d that converge toward a slot 14c defined at the end of walls 14a and 14b. It is submitted that material 16 flowing through trough 14 contacts all three walls or surfaces 14a, 14b, and 14d as is clearly illustrated in Figure 1.

The present amendment cancels claim 3 without prejudice and amends claims 4-5 to depend from new claim 21. The pertinent portion of new claim 21, similar to cancelled claim 3, requires "causing the solidifiable liquid material to flow along a surface of a supply means toward an outlet slot through which said liquid flows so as to provide a curtain of said solidifiable liquid material". In addition, new claim 23, similar to cancelled claim 3, requires "at least one stream of gas being introduced between the solidifiable liquid material and the surface".

It is respectfully submitted that the Office Action inaccurately interprets the "surface" element recited in now cancelled claim 3 and, thus of new claims 21 and 23, as being only wall 14d. However, the specification clearly supports the introduction of the air stream between the surfaces 14a, 14b and the flowing material. It is submitted that the interpretation of the "surface" element as only wall 14d as asserted in the Office Action is inaccurate with respect to the full scope of disclosure provided in the present application. Thus, it is submitted that claim 3 as filed, as well as new claims 21 and 23, are not only supported by the specification, but also particularly point out and distinctly claim the present invention.

For the reasons set forth above, reconsideration and withdrawal of the rejection under §112, first paragraph is respectfully requested.

Claims 1-12 were rejected under 35 U.S.C. §112, second paragraph. The present amendment cancels claim 1, amends claims 2 and 9 to depend from new claim 23, and amends claims 4-8 and 10-12 to depend from new claim 21.

New claim 21 lacks the objected movement element. New claim 23, in pertinent part, requires "effecting relative movement" between the articles to be coated and the curtain

(emphasis added). It is respectfully submitted that these amendments render the §112, second paragraph rejection moot. Reconsideration and withdrawal is therefore respectfully requested.

Claims 1-12 and 14-16 were rejected variously under 35 U.S.C. §102 in view of U.S. Patent No. 5,004,620 to Straight et al. (Straight), European Patent Application No. 0 551 237 to Finnicum et al. (Finnicum), British Patent No. 1,559,701 to Ridley et al. (Ridley), U.S. Patent No. 4,128,667 to Timson (Timson), U.S. Patent No. 5,409,733 to Boger et al. (Boger). In addition, claims 3-5, 7, 11, and 18-20 were rejected variously under 35 U.S.C. §103 over Straight and Straight in view of Boger or Timson. Applicants respectfully traverse these rejections.

Claims 1, 3, and 14 has been cancelled without prejudice, rendering the rejection to the same moot. Claims 4-8, 10-12, and 15-16 now depend from new claim 21. Claim 21 requires, in part, causing the solidifiable liquid material to flow along a surface of a supply means and subjecting the solidifiable liquid material to at least one stream of gas under pressure. The stream of gas is introduced between the solidifiable liquid material and the surface.

It is respectfully submitted that none of the cited art discloses or suggests gas introduced between the material and a surface of the supply means as claimed in claim 21.

Straight discloses an air stream that impinges on confections after a first coating is applied to smooth the applied first coating and maintains positive pressure between the two coating curtains to ensure the curtains fall substantially vertically. Specifically, Straight discloses an air manifold 86 is positioned below the apex of an inverted, V-shaped diverter 72 that forms a pair of curtains of enrobing material that are spaced from each other. The air manifold 86 has an air outlet slot 88 that provides a downward curtain of pressurized air, which impinges upon the confections to smooth the coating layer. Additionally, air manifold 86 provides a volume of air that is slightly above atmospheric pressure to keep the material curtains from curving inwardly so that each of the curtains falls substantially vertically. See Col. 5, line 44 through Col. 6, line 20, as well as Figure 4. Thus, Straight discloses air that is directed on the material after it has fallen from diverter 72.

Finnicum discloses forming a curtain 17 at a lip 16 of a hopper 13. The curtain 17 is then moved by applying positive or negative static air pressure on one side of the curtain. See Col. 4, lines 40 through Col. 5, line 20. Thus, Finnicum discloses applying air pressure of a curtain 17 after it has fallen from the lip 16 of hopper 13.

Ridley discloses a slide hopper 1 that forms a multilayer curtain 10 at a lip 4 of the hopper. A curved rigid member 12 is positioned close to the end of lip 4 and a baffle 13 is positioned between the member and the lip. Air A is forced between the member 12 and the baffle 13 to form a descending laminar air flow between the member and the curtain 10. See Page 4, lines 21-56. Thus, the air A of Ridley is applied after the curtain 10 is formed at lip 4.

Timson, much like Ridley discussed above, discloses a fluid 1 emitted from a coating applicator 2 that is accelerated by two sets of air foils, each set comprising a pair of air foils, 3 and 4, on opposite sides of the fluid stream, between the applicator and the web. A gas such as air is directed over the foils in the direction of arrows 6 at a velocity that provides the desired stream acceleration and follows arrows 6a out of the system. See Col. 3, lines 10-15 as well as Figure 1. Thus, the gas stream 6 of Timson is applied after the fluid 2 is emitted from the coating applicator 2.

Boger discloses air slots 61 and 62 that are oriented on an angle with respect to the elongation of the extrusion slot 37. Accordingly, when coating material is extruded through the slot 37 and outwardly of the extrusion outlet 40, air moving through the air slots 61 and 62 is impinged on the material before that material engages or is deposited on an underlying substrate which is presented for coating. See Col. 6, lines 21-28 and Figure 2. Thus, the air exiting slots 61, 62 of Boger is also applied after the material is emitted from extrusion slot 40.

It is respectfully submitted that each cited reference discloses the application of air or air pressure to material after the material has been formed into a curtain or emitted from the device. As set forth in the present application at least at page 2, the physical characteristics of the chocolate that passes through the outlet slot can cause the curtain to "neck" at the slot. It is

respectfully submitted that the application of air/ air pressure after the formation of the curtain as disclosed in the cited art is not directed to nor does it affect the correction of this necking effect. Rather, the disclosed cited art is directed to smoothing of the curtain and/or correcting movement of the curtain from a desired vertical path. Advantageously, claim 21 mitigates the necking effect, a problem not recognized or addressed by the cited art, by introducing gas between the material and a surface of the supply means.

Thus, it is submitted that none of the cited art, alone or in combination, discloses or suggests introducing gas between the material and a surface of the supply means as claimed in claim 21 (e.g., before the formation of the curtain).

For at least the reasons set forth above, it is respectfully submitted that claim 21 is believed to be in condition for allowance. Since claims 4-8, 10-12, 15-16, and 22 depend from the aforementioned claim 21, they are also believed to be in condition for allowance.

Claim 23 requires, in part, causing a solidifiable liquid material to flow along a surface of a supply means and subjecting the solidifiable liquid material to at least one stream of gas under pressure. The stream of gas is introduced between the solidifiable liquid material and the surface.

Again, none of the cited art discloses or suggests introducing a stream of gas between the solidifiable liquid material and a surface of the supply means. In contrast, Straight, Finnicum, Ridley, and Boger each disclose the application of air or air pressure to material after the material has been formed into a curtain or emitted from the device. This application of air/air pressure after the formation of the curtain smoothes the curtain and/or corrects movement of the curtain from a desired vertical path.

In contrast, claim 23 requires a stream of gas that is introduced between the solidifiable liquid material and the surface. Advantageously, claim 23 also mitigates the necking effect that can take place at the slot, a problem not recognized or addressed by the cited art.

Thus, it is submitted that none of the cited art, alone or in combination, discloses or suggests a stream of gas that is introduced between the solidifiable liquid material and the surface as claimed in claim 23. For at least the reasons set forth above, it is respectfully submitted that claim 23 is believed to be in condition for allowance. Since claims 2, 9, and 24 depend from the aforementioned claim 23, they are also believed to be in condition for allowance.

Claim 18 requires, in part, directing a pressurized gas at a surface of said chocolate to form a layer of gas so that the layer of gas reduces friction between the chocolate and the supply container.

It is again respectfully submitted that Straight, Finnicum, Ridley, and Boger each disclose the application of air or air pressure to material after the material has been formed into a curtain or emitted from the device. Since the curtain in each of these references has already exited the supply container, this application of air/air pressure after the formation of the curtain of the cited references simply can not reduce friction between the chocolate and the supply container as required by claim 18.

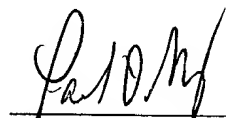
Thus, it is submitted that claim 18 is not disclosed or suggested by the cited references, alone or in combination. Claim 18 is therefore believed to be in condition for allowance. Since claims 19-20 depend from the aforementioned claim 18, they are also believed to be in condition for allowance.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is most earnestly solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below for an interview.

Respectfully submitted,

Date: September 22, 2003



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